Some Stray Tropical and Sub-Tropical Sea Birds in New Zealand.

By E. G. TURBOTT, Auckland Museum.

Fregata minor (Gm.) (greater frigate bird).

The only New Zealand specimen in the Auckland Museum is one which was included amongst records of *Fregata ariel* by Oliver (1930), and had been incorrectly assigned to that species in the collection. It has the following data: A.M. 111.1, female, collected at Lake Kimihia (near Huntly, Waikato district), in 1911, by G. Clinch. The specimen was mounted in flight. It is in adult plumage with characteristic grey throat and foreneck. Dimensions are as follows: wing 583, tail 413, tarsus 20, middle toe 67, culmen 98 mm.

Fregata ariel (G. R. Gray) (lesser frigate bird).

One record only of a specimen of the lesser frigate bird from New Zealand in the Auckland Museum collections is given by Oliver (1930). that of an adult female obtained at Pahi, on the Kaipara Harbour, on 30th March, 1907. Cheeseman (1908) gives details of the capture of this specimen, which was found on the farm of Mr. G. V. New. It was apparently almost exhausted when captured and died a few days later. The locality is about half-way between the east and west coasts and the distance in a direct line from the sea (a little overestimated by Cheeseman) is 15-20 miles. In this specimen, as noted by Cheeseman, the collar on the hind neck is white, mottled with dark brown, without trace of rufous. A few scattered feathers form the only rufous coloration on the breast.

A second specimen was obtained in March, 1918, when it was blown ashore during a heavy gale. This was a female and the locality recorded was Auckland. It is in immature plumage, and the only rufous coloration on the white areas is a faint wash on the crown and nape. A mottling of dark brown appears on the forehead and crown. On the underparts, an irregular band of greyish brown extends across the belly from the flanks.

The third specimen obtained was an adult male, in brilliantly iridescent plumage, found dead at Panmure, near Auckland, on 7th June, 1922, by N. Freebairn. It was mounted, as in the case of the two specimens above, being shown with the bright throat sac partly inflated.

In March, 1936, the partial remains of another specimen were found at Te Kuiti, approximately 100 miles to the south of Auckland, and 25 miles inland. This was a female, and in immature plumage.

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A recent example, and the fifth from New Zealand in the Auckland Museum, was received from the caretaker of Little Barrier Island, Mr. C. H. Parkin, who discovered the bird exhausted on the ground near the homestead on 4th March, 1951. Shortly afterwards Mr. Parkin disturbed a harrier in the act of carrying it off, but was able to save the specimen. It had apparently died before being attacked and was still undamaged. The specimen is an adult female. It is in process of moult, and numerous fresh feathers are to be seen coming out of the sheaths on neck, mantle and belly. Where the new plumage has already appeared it is iridescent, especially the lanceolate feathers of the head and back which have a strong greenish and purplish sheen; and wings and tail are distinctly iridescent. Compared with this specimen, the adult female from Pahi previously mentioned is in duller plumage; it is faintly iridescent on the lower back, wings, tail and head, and has a patch of worn brown feathers on the back immediately below the hind neck. There is a much greater amount of rufous coloration on the white areas in the present specimen, forming an irregular wash on the underparts; the collar round the hind neck is mottled white and dark brown mid-dorsally, and the feathers are chestnut at the tips. The wing spread of this specimen was approximately 5ft. 9in. (175 cm.).

The following are observations from several informants which record the movements apparently of the same bird during the previous day, 3rd March. The bird was seen at noon at Laingholm, on the north shore of the Manukau Harbour, near Auckland, by Mr. E. D. Willis. A sketch of the bird in flight made by Mr. Willis shows the forked tail, the distinctive shape of the bill and white ventral area. It was seen a second time at 4 p.m. near South Head, Kaipara Harbour, by Messrs. B. Roy and J. B. Herman, who noted the same distinguishing characters, and believed that it was a frigate bird. It flew in to rest on a tree, perching on a broken limb and remaining for three-quarters of an hour, and appeared to be weak or sick. The wing spread was estimated at 5-6 feet, and the reddish legs were noted. The distance from Laingholm to South Head, Kaipara Harbour, is approximately 45 miles in a N.W. direction, and Little Barrier Island, where it was found by Mr. Parkin, lies about 50 miles E.N.E. of South Head.

This frigate bird was undoubtedly brought to New Zealand by the particularly severe cyclonic storm experienced in the North Auckland and Auckland districts from 27th February-1st March, 1951. It is of interest that a similar occurrence was recorded in Australia, a frigate bird of unknown species being seen near Sydney on 13th March, 1951, shortly after a period of severe weather (Marshall, 1951). An account of some other occurrences of storm-driven sea birds in eastern Australia in relation to cyclones is given by Goddard and Hindwood (1951).

The following are the dimensions of the above specimens of F. ariel:-

A.M. 112.1: Pahi; wing 525, tail 315, tarsus 18, toe 57, culmen 92 mm.

A.M. 112.2: Auckland; wing 520, tail 315, tarsus 17, toe 58, culmen 86 mm. A.M. 112.4: Panmure; wing 545, tail 343, tarsus 16, toe 61, culmen 85.5 mm.

A.M. 112.5: Te Kuiti; culmen 90 mm.

A.M. 112.6: Little Barrier I.; wing 525, tail 335, tarsus 17, toe 61.5, culmen 88.5 mm.

Observation of Fregata minor. The writer is indebted to Mr. H. R. McKenzie, of Clevedon, for information on a frigate bird observed at Kawakawa Bay, Clevedon, on 18th February, 1951. The observations were made by Mr. J. G. Moffat, who saw the bird from a boat offshore closely enough to give details of its plumage which suggest that it was an adult female *F. minor*. The underparts were white, and region of the throat and foreneck white or grey, but not black as in the adult female *F. ariel*. There had been strong winds from the N.E. for several days before the bird was observed. It forms an addition to several recent field records (from Masterton, August, 1949; Tauranga, May, 1950; Whangarei, June, 1950), all apparently having been adult females of *F. minor* (Stidolph; Davenport; Turbott: 1950).

Sterna bergii Licht. (crested tern).

A specimen in immature plumage from Sunday Island, Kermadecs, is listed by Oliver (1930). In addition, the Museum has the dried remains of an adult picked up by H. R. McKenzie on the beach at Kapo Wairua, at the eastern extremity of Spirits Bay, on 25th March, 1951 (McKenzie, 1952). Dimensions of the two specimens are:—

- A.M. 138.1: Sunday Island; male; wing 320, tail 138, tarsus 27, toe 33, culmen 57 mm. (1st April, 1910.)
- A.M. 138.9: Spirits Bay; tail (worn) 166 approx., tarsus 27, toe 32, culmen 61.5 mm. (25th March, 1951.)

Portions of the plumage of head, back, tail and the upper coverts of one wing are still attached to the specimen found at Spirits Bay, showing that it was in breeding plumage: the crown is black, lower back and wing coverts uniform dark grey and bill yellow with a dark area at the base. The flight feathers are missing from both wings. The coloration of the lower back and wing coverts is of a dark grey shade, corresponding closely to the only example of *Sterna bergii cristata* Stephens* in the Auckland Museum collection (A.M. 138.2: Cronulla Reef, Sydney). Unfortunately the wing length is not available, but it is close to this specimen in other dimensions. The distribution of *cristata* is from the Malay Peninsula and the Riu Kiu Islands to Australia and the central Pacific.

It is presumed that the immature specimen from Sunday Island also belongs to this subspecies: the head is dark brown mottled with white on the crown; back and median wing coverts pale grey, some feathers faintly washed with brown; lesser wing coverts darker grey; secondaries and scapulars, on outer webs, dark brown; outer tail feathers (old) dark brown, inner tail feathers (new) grey; four outer primaries (old) dark brown, inner primaries (new) silver-grey; outermost primary short; neck and underparts white.

^{*} cf. Peters, "Checklist of Birds of the World," II (1934); also Whittell and Serventy, "A Systematic List of the Birds of Western Australia" (1948), who consider that S.b. gwendolenae Mathews (Rockingham, Western Australia) is of unsatisfactory status.

Sterna fuscata L. (sooty tern).

A specimen from Waitomo Caves, near Te Kuiti, in the Auckland Museum is recorded by Oliver (1930). The following data on the specimen are available: A.M. 87.1, male, collected near the Waitomo Caves, after the cyclonic storm of March, 1918, by H. F. Smith. It is in adult plumage, measurements being: wing 298, tail 194, tarsus 23, toe 27, culmen 42.6 mm.

The three following specimens in immature plumage have also been obtained :---

A.M. 87.65: Tauranga, approximately 5th February, 1936. Measurements: wing 284, tail 117, tarsus 23, toe 27, culmen 38.7 mm. There are well marked pale tips on the feathers of the back and wing coverts, and the tail feathers.

A.M. 87.64: Manurewa, near Auckland, picked up after a northerly gale, on 26th March, 1936. Measurements: wing 280, tail 119, tarsus 23, toe 25, culmen 38.8 mm. Only a few white tips on the upper parts; tail much worn, new tail feathers and coverts appearing.

A.M. 87.66: New Plymouth, on the beach near the Waiwhakaiho River, 4th March, 1951. Only the tail and one foot of this specimen were saved, the remainder being destroyed subsequently by dogs. Dimensions are as follows: tail 115, tarsus 22, toe 30 mm.

Notes were made by the finder, Mr. M. J. S. Black, and include the following details: the whole upper surface blackish brown, with lighter flecking on mantle and wing coverts; primary feathers sooty black; foreneck and breast brown; abdomen and under tail coverts greyish white; length of bill approximately 47 mm., wing approximately 295 mm.

Information on another specimen, apparently in transitional plumage from juvenal (or post-juvenal) to adult, has been made available by Dr. C. A. Fleming, who found it on Muriwai Beach, west of Auckland, on 7th February, 1936.* The specimen was apparently placed in the Auckland Museum, but unfortunately cannot now be traced. Accordingly, the following detailed description is recorded (notes by C. A. Fleming): *S. fuscata;* young; much decayed and sex not determined; wing 290, tail 145, bill 41, tarsus 24.5 mm.; forehead white; head, crown black; hind neck and general upper surface sooty black,

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^{*} This specimen, and the specimen from Tauranga (A.M. 87.65), were found after the cyclonic storm on 1st-2nd February, 1936. Two additional reports of birds blown ashore during the storm were received by R. A. Falla, who included all the records in nature notes in *The New Zealand Herald*, 7th March, 1936: they were a sooty tern, found at Te Awamutu (80 miles south of Auckland), and a red-tailed tropic bird (*Phaethon rubricauda* Bodd.) at Taupo. The storm was the most severe which had been experienced in New Zealand since March, 1918, when the specimens mentioned above of the lesser frigate bird and sooty tern were obtained.

with most feathers margined with white; wings sooty black above, marginal coverts, primaries and secondaries sooty black, grey beneath, white quills, under coverts white; tail coverts black above, grey beneath, white quills; streamers white-quilled above, inner margin whitish becoming sooty towards tips, outer margins grey and sooty, darker at extremity; bill and feet black. Notes.—Differs from juvenal plumage in that the white parts of the adult are present; dark parts sooty black like the adult. Differs from adult (breeding) in having white tips to body feathers, and grey streamers.

Procelsterna cerulea albivitta Bonap.* (grey noddy).

Buller (1888) in recording the specimen which he obtained in the early months of 1882 from Cape Maria van Diemen gives notes from the collector, C. H. Robson. The specimen was found exhausted on shore after a heavy S.W. gale; and the same informant stated that another was "observed on the wing, one very calm day."

It has been observed to the west of New Zealand by Cunningham (1950). Two birds were seen at sea about 300 miles from North Cape en route from Sydney to Auckland on 16th October, 1949.

On 16th January, 1951, on the return voyage from the Three Kings Islands, the writer closely observed a flock of four grey noddies. This was close inshore off Cape Karikari, to the north of Doubtless Bay, North Auckland. The birds remained near the vessel for half an hour, either flying overhead or circling widely at no great distance, once coming down to rest on the sea. The white under wing coverts were clearly seen. The weather was calm, with settled conditions for some time previously.

Some further observations of interest were made to the south of the Kermadec Islands when the writer accompanied the Danish "Galathea" Deep Sea Expedition in February, 1952. A single grey noddy was first seen on 13th February, and two on the following day at a distance of approximately 350 miles south of Sunday Island, Kermadecs, and 340 miles E.N.E. of Auckland. (The position was roughly 35° 20' S, 178° 50' W.) A single bird was again seen on both 19th and 20th February, when the "Galathea" was again in nearly the same position. The weather during this and the preceding period was almost continuously settled.

There is some indication in these observations that this nonmigratory species wanders fairly widely, on occasions at least, away from the immediate neighbourhood of the breeding stations, and possibly also is a fairly regular visitor to northern New Zealand.

^{*} Trinomial follows Peters, "Checklist of Birds of the World," II (1934). The birds observed were identified as "grey" and not "blue-grey" noddies, and are presumed to belong to this subspecies (distribution, Friendly and Kermadec Islands, Lord Howe Island, Norfolk Island). It is unlikely that the Easter I. or St. Ambrose I. (Chile) subspecies would reach this area.

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